PLANT PATENTS

JANUARY 1/1/1977 -- DECEMBER 31/1999



March 2000 U.S. PATENT AND TRADEMARK OFFICE OFFICE FOR PATENT AND TRADEMARK INFORMATION/ TAF PROGRAM PK 3 - SUITE 441, WASHINGTON, DC 20231 TEL (703) 306-2600/ FAX (703) 306-2737

A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

Plant Patents Report 1/1/1977 - 12/31/1999 Explanation of Data

This Technology Assessment and Forecast (TAF) Program Report profiles patent activity for U.S. plant patents (hereafter referred to as patents) granted between January 1, 1977 and December 31, 1999. The source of the data used for this report is the TAF data base maintained by the Office for Patent and Trademark Information.

Data Distribution By Date of Grant and By Date of Application

Parts A1 and A2

Part A1 distributes patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes grant data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data in the "Pre 1986" column corresponds to the period January 1, 1977 through December 31, 1985.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 40% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for the most recent years are incomplete.* This is because a significant number of the applications filed in the most recent years, which will ultimately become patents, were still pending in **December 1999**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing such as occurred in 1986 when the PTO issued fewer patents than would normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of

patent grant. Such variation in pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

Parts of the Report

Parts A1 and A2 present tables which show, by number and percent, the patent activity. Part A1 presents data by year of patent grant ("Patents Granted by Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted by Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Information on **patent ownership** reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for Foreign Government patents.

Part B is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received 3 or more U.S. plant patents since 1977. Data line 1 for each listed organization distributes counts of patent grants by year of grant. Data line 2 for each organization redistributes those same patent grants by year in which the patented application was filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

to plant patents are not available.

^{*} As of December 31, 1999, UTILITY patent application data (most issued patent documents are utility patents) were approximately 79% complete for patent applications filed in 1997 and 21% complete for applications filed in 1998. They are essentially complete for applications filed prior to 1997. Currently, completion percentages restricted

Part A1 Patent Grants As Distributed By Year of Patent Grant

PLANT PATENTS, 1977 - 1999 Page A1- 1

999 Total
421 7137
201 4239
220 2898
53 764
65 686
10 335
20 260
11 158
12 120
6 94
11 86
9 81
6 74
5 61
2 60
1 35
17
13
1 10
1 9 1 8
1 8 7
3
1 3
2
2
2
2 2
1
1
1
1 1
1 1
1 1
1 1
1 1
168 3616
168 3616 1 4
168 3616 1 4
168 3616 1 4 65 1464
2

PLANT PATENTS, 1977 - 1999 Page A1- 2

		Patents	Granted	By Da	ate Of	Patent	Grant (Granted:	Jan 01,	1977 -	Dec 31,	1999)					
							PE	RCENT OF	PATENTS								
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
U.S. Origin	74	67	57	61	59	48	67	61	53	57	52	51	58	44	48	59	
Foreign Origin	26	33	43	39	41	52	33	39	47	43	48	49	42	56	52	41	
GERMANY	10	8	11	6	17	16	11	5	12	6	11	13	9	11	13	11	
NETHERLANDS	4	8	9	13	10	12	7	14	14	13	9	11	7	13	15	10	
FRANCE	3	7	3	8	4	11	6	4	5	3	4	5	7	5	2	5	
UNITED KINGDOM	3	1	7	3	2	3	2	1	3	7	4	2	6	4	5	4	
DENMARK	1		1	3	1		1	1	1	2	4	7	2	7	3	2	
JAPAN		1		1	2	2	1	3	2	2	3	2	2	4	3	2	
ISRAEL						1		2	5	3	5	2		2	1	1	
AUSTRALIA				2	2	1	3	1	1		1	2	4	2	3	1	
NEW ZEALAND	1		1	1	1	1	1	2	2	1	1	1	1	1	2	1	
CANADA			1		1	2		2	1		2		4	1	1	1	
BELGIUM		1	1	1			1	1		2	1	1	1	4	1	1	
COSTA RICA	1	3	1				1		1	1	2	1		1		1	
ITALY		2		1		3		1				1				0	
AUSTRIA			7													0	
SWITZERLAND	1															0	
SPAIN								1		1		1				0	
SWEDEN																0	
SOUTH AFRICA														1		0	
COLOMBIA																0	
ARGENTINA																0	
INDIA																0	
TAIWAN																0	
IRELAND																0	
HONDURAS																0	
SOUTH KOREA																0	
NORWAY																0	
MOROCCO																0	
LEBANON																0	
MEXICO																0	
PHILIPPINES																0	
SLOVAKIA																0	
Ownership:																	
U.S. Corporations	57	56	52	46	52	45	53	51	52	50	52	45	50	42	40	51	
U.S. Government													1			0	
U.S. Individuals	30	28	19	23	20	18	21	19	14	16	15	15	19	13	15	21	
Foreign Corporations	8	12	19	23	15	24	12	23	24	30	27	32	25	35	35	21	
Foreign Government								2	1		1		1			0	
Foreign Individuals	5	4	10	8	12	13	12	5	9	3	5	8	5	9	9	7	

Part A2 Patent Grants As Distributed By Year of Patent Application

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 1999) ----

						N	UMBER O	F PATENTI	ED APPLITO	'ATTONS							
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	
Total	2114	304	422	360	363	410	399	317	340	424	431	617	535	101		7137	
U.S. Origin	1500	184	241	224	195	251	212	180	214	221	218	313	228	58		4239	
Foreign Origin	614	120	181	136	168	159	187	137	126	203	213	304	307	43		2898	
GERMANY	204	15	66	56	53	45	35	26	25	46	52	47	80	14		764	
NETHERLANDS	105	38	60	19	40	40	74	28	41	37	47	57	78	22		686	
FRANCE	78	30	12	17	37	22	12	19	13	14	21	38	17	5		335	
UNITED KINGDOM	74	9	8	12	10	13	7	16	14	23	11	33	30			260	
DENMARK	17	12	1	4	2	2	6		8	19	27	35	25			158	
JAPAN	8	3	7	8	4	12	4	11	2	12	15	23	11			120	
ISRAEL	2	2		2		1	29	5	7	25	3	12	6			94	
AUSTRALIA	2	2	14	2	8	4	2	2	2	4	8	21	13	2		86	
NEW ZEALAND	24	3	5	2	5	6	8	6	1	5	2	6	8			81	
CANADA	12		3	6	2	4	6	5	1	6	9	11	9			74	
BELGIUM	7	3	1			4		8	8	2	3	15	10			61	
COSTA RICA	31	1				3		5	1	5	8		6			60	
ITALY	12	2		7	4	1	3	1		1	2	2				35	
AUSTRIA	16								1							17	
SWITZERLAND	11		2													13	
SPAIN			2			2		3			2		1			10	
SWEDEN	4				1		1			1			2			9	
SOUTH AFRICA	1										1	4	2			8	
COLOMBIA	3			1	1			1		1						7	
ARGENTINA	1								1		1					3	
INDIA													3			3	
TAIWAN	1							1								2	
IRELAND									1	1						2	
HONDURAS										1	1					2	
SOUTH KOREA													2			2	
NORWAY	1															1	
LEBANON					1											1	
MEXICO													1			1	
PHILIPPINES													1			1	
SLOVAKIA													1			1	
MOROCCO													1			1	
Ownership:																	
U.S. Corporations	1187	144	215	184	178	205	184	183	184	213	191	290	202	56		3616	
U.S. Government					1						1	1	1			4	
U.S. Individuals	600	68	82	76	61	82	58	48	59	64	77	93	82	14		1464	
Townston Common 11	01.4	7.1	0.1		01		11.		00	100	120	100	100	21		1503	
Foreign Corporations	214	71	81 2	52	81	71	114 11	69	88	123	130	189	189	31		1503	
Foreign Government	113	21	42	40	1 41	2 50	32	3 14	1 8	4 20	2 30	4 40	2 59			32 518	
Foreign Individuals	113	21	42	48	41	50	32	14	8	20	30	40	59			218	

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	Pat	ents G	ranted E	By Date	Of Pat	ent App	lication	(Grant	ed: Jan	01, 1977	' - Dec 3	1, 1999)					
						PI	ERCENT OF	PATENTE	D APPLIC	CATIONS							
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100	
U.S. Origin	71	61	57	62	54	61	53	57	63	52	51	51	43	57		59	
Foreign Origin	29	39	43	38	46	39	47	43	37	48	49	49	57	43		41	
GERMANY	10	5	16	16	15	11	9	8	7	11	12	8	15	14		11	
NETHERLANDS	5	13	14	5	11	10	19	9	12	9	11	9	15	22		10	
FRANCE	4	10	3	5	10	5	3	6	4	3	5	6	3	5		5	
UNITED KINGDOM	4	3	2	3	3	3	2	5	4	5	3	5	6			4	
DENMARK	1	4		1	1		2		2	4	6	6	5			2	
JAPAN		1	2	2	1	3	1	3	1	3	3	4	2			2	
ISRAEL		1		1			7	2	2	6	1	2	1			1	
AUSTRALIA		1	3	1	2	1	1	1	1	1	2	3	2	2		1	
NEW ZEALAND	1	1	1	1	1	1	2	2		1		1	1			1	
CANADA	1		1	2	1	1	2	2		1	2	2	2			1	
BELGIUM		1				1		3	2		1	2	2			1	
COSTA RICA	1					1		2		1	2		1			1	
ITALY	1	1		2	1		1									0	
AUSTRIA	1															0	
SWITZERLAND	1															0	
SPAIN								1								0	
SWEDEN																0	
SOUTH AFRICA												1				0	
COLOMBIA																0	
ARGENTINA																0	
INDIA													1			0	
TAIWAN																0	
IRELAND																0	
HONDURAS																0	
SOUTH KOREA																0	
NORWAY																0	
LEBANON																0	
MEXICO																0	
PHILIPPINES																0	
SLOVAKIA																0	
MOROCCO																0	
Ownership:																	
U.S. Corporations	56	47	51	51	49	50	46	58	54	50	44	47	38	55		51	
U.S. Government	30	-,		-												0	
U.S. Individuals	28	22	19	21	17	20	15	15	17	15	18	15	15	14		21	
C.D. Individuals	20	44		21	Δ,	20	1.5	1.5	Τ,	1.5	10	13	13	17			
Foreign Corporations	10	23	19	14	22	17	29	22	26	29	30	31	35	31		21	
Foreign Government	10	23	17	17	22	Τ,	3	1	20	1	50	1	33	31		0	
Foreign Individuals	5	7	10	13	11	12	8	4	2	5	7	6	11			7	
rorergn individuals	3	,	10	13	11	14	0	-	4	,	,	Ü	11			,	

Part B

Ranked Listing of Organizations with Patent Grants
As Distributed By Year of Patent Grant
and As Distributed By Year of Patent Application

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31,	, 1999)	1	Ranked Li	st of Or	ganizati	ons with	5 or	More Pat	tents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
YODER BROTHERS, INC.																	
Patents By Year of Grant:	111	17	9	21	45	14	47	18	38	53	22	29	36	26	22	508	
Patents By Year of Application:	137	14	21	32	45	28	35	24	43	29	23	40	33	4	0	508	
CONARD-PYLE COMPANY																	
Patents By Year of Grant:	50	6	6	13	14	21	12	9	24	13	10	16	14	7	1	216	
Patents By Year of Application:	64	10	7	11	18	17	11	18	12	10	18	13	7	0	0	216	
BEAR CREEK GARDENS, INC.																	
Patents By Year of Grant:	0	0	0	0	9	2	15	14	13	61	29	17	4	15	29	208	
Patents By Year of Application:	0	0	9	2	0	27	14	26	30	35	12	17	16	20	0	208	
JACKSON & PERKINS CO.																	
Patents By Year of Grant:	78	21	13	13	21	10	1	0	0	0	0	0	0	0	0	157	
Patents By Year of Application:	109	17	18	6	7	0	0	0	0	0	0	0	0	0	0	157	
MIKKELSENS, INC.																	
Patents By Year of Grant:	60	6	12	23	6	12	0	15	6	12	1	3	1	0	0	157	
Patents By Year of Application:	78	12	15	2	12	13	2	6	12	1	4	0	0	0	0	157	
PAUL ECKE RANCH, INC.																	
Patents By Year of Grant:	9	0	0	0	0	14	7	11	25	12	16	1	14	26	12	147	
Patents By Year of Application:	9	0	0	11	6	15	8	18	11	16	4	22	19	8	0	147	
PAN AMERICAN PLANT COMPANY																	
Patents By Year of Grant:	108	8	0	0	0	0	0	0	0	0	0	0	0	0	0	116	
Patents By Year of Application:	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	
NOR'EAST MINIATURE ROSES, INC.																	
Patents By Year of Grant:	36	3	9	2	17	1	5	5	7	4	1	6	5	4	2	107	
Patents By Year of Application:	48	2	11	7	4	5	5	4	3	7	2	4	5	0	0	107	
DEVOR NURSERIES, INC.																	
Patents By Year of Grant:	5	0	2	0	4	0	16	18	5	4	10	13	5	7	6	95	
Patents By Year of Application:	7	0	3	1	7	18	9	7	5	9	13	11	5	0	0	95	
VAN STAAVEREN B.V.																	
Patents By Year of Grant:	0	0	5	4	6	0	5	17	4	12	6	4	4	10	9	86	
Patents By Year of Application:	5	3	7	0	0	22	4	2	10	6	4	11	9	3	0	86	
MELRIDGE, INC.																	
Patents By Year of Grant:	17	1	19	26	20	0	0	0	0	0	0	0	0	0	0	83	
Patents By Year of Application:	37	21	25	0	0	0	0	0	0	0	0	0	0	0	0	83	
	-		-	-	-	-	-	-		-	-	-	-	-	-		

Organizational Patenting				(Grante	ed: Jan 0	1, 1977	- Dec 31	, 1999)	R	anked Li	st of Or	ganizati	ons with	5 or	More Pat	cents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
FIDES BEHEER B.V.																	
Patents By Year of Grant:	0	0	0	13	20	0	0	14	23	1	2	1	2	3	0	79	
Patents By Year of Application:	0	13	18	2	0	4	31	2	1	2	1	3	2	0	0	79	
GESSELLSCHAFTSVERTRAG UBER DIE ERFIND																	
Patents By Year of Grant:	50	5	0	6	16	0	0	0	0	0	0	0	0	0	0	77	
Patents By Year of Application:	55	6	16	0	0	0	0	0	0	0	0	0	0	0	0	77	
UNIVERSITY OF CALIFORNIA, THE REGENTS	OF																
Patents By Year of Grant:	36	1	1	6	10	1	2	0	4	8	2	2	0	4	0	77	
Patents By Year of Application:	40	3	11	1	0	2	3	1	8	2	2	4	0	0	0	77	
FLORFIS AG																	
Patents By Year of Grant:	0	0	0	0	0	6	3	0	8	15	14	11	5	7	6	75	
Patents By Year of Application:	0	0	0	0	9	0	7	1	15	18	10	8	7	0	0	75	
LABORATOIRE DE PHYSIOLOGIE VEGETALE DI											_				_		
Patents By Year of Grant:	20	6	3	17	3	11	0	0	1	4	1	0	0	0	0	66	
Patents By Year of Application:	29	18	2	8	3	0	1	4	0	1	0	0	0	0	0	66	
GEORGE J. BALL, INC.																	
Patents By Year of Grant:	7	0	0	0	0	0	3	0	13	4	12	22	0	0	0	61	
Patents By Year of Application:	7	0	0	0	0	3	7	7	3	12	22	0	0	0	0	61	
ARMSTRONG NURSERIES, INC.																	
Patents By Year of Grant:	46	7	2	2	0	0	0	0	0	0	0	0	0	0	0	57	
Patents By Year of Application:	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	
BALL PANAM PLANT COMPANY		_					_								_		
Patents By Year of Grant:	0 27	6 10	19 19	21 0	10 0	0	0	0	0	0	0	0	0	0	0	56 56	
Patents By Year of Application:	21	10	19	U	U	U	U	U	U	U	U	U	U	U	U	56	
DANZIGER - "DAN" FLOWER FARM																	
Patents By Year of Grant:	0	0	0	0	0	0	0	1	16	2	20	4	0	7	5	55	
Patents By Year of Application:	0	0	0	0	0	0	17	2	0	21	3	7	5	0	0	55	
DE RUITER'S NIEUWE ROZEN B.V.																	
Patents By Year of Grant:	0	0	0	4	1	1	7	0	3	6	5	9	0	10	7	53	
Patents By Year of Application:	0	4	0	1	6	2	3	6	1	2	11	4	13	0	0	53	
CALIFORNIA FLORIDA PLANT COMPANY L.P.	_	_	_	_	_	_	_	_		_	_	_		_	_	4.0	
Patents By Year of Grant:	0	0	0	0	0	0	3	8	21	0	5	0	4	8	0	49	
Patents By Year of Application:	0	U	U	0	0	10	9	12	1	5	0	12	U	0	0	49	

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31,	, 1999)	R	anked Li	st of Or	ganizati	ons with	5 or 1	More Pat	ents	•
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
CHRYSANTHEMUM BREEDERS ASSOCIATION N.	7.																
Patents By Year of Grant:	3	1	13	11	2	0	0	0	2	9	0	0	3	3	0	47	
Patents By Year of Application:	22	1	6	1	0	0	4	0	7	0	0	6	0	0	0	47	
DAVID AUSTIN ROSES LIMITED																	
Patents By Year of Grant:	0	0	0	0	0	4	3	0	9	20	0	5	0	3	3	47	
Patents By Year of Application:	0	0	0	4	3	9	0	11	5	4	5	0	6	0	0	47	
14001105 27 1041 01 11551104010111		•		-			•			-	-		•				
CLEANGRO, LTD.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	3	0	0	15	14	11	43	
-		0	0	0	0	0	0	2	1	1	0	25		0	0		
Patents By Year of Application:	0	U	U	U	U	U	U	2	1	1	U	25	14	U	U	43	
WEEKS WHOLESALE ROSE GROWERS, INC.																	
Patents By Year of Grant:	0	0	0	0	3	0	1	2	3	0	10	7	4	7	3	40	
Patents By Year of Application:	0	0	1	2	0	1	3	2	2	8	7	6	6	2	0	40	
SUNTORY LTD.																	
Patents By Year of Grant:	0	0	0	0	3	0	0	0	0	2	7	3	3	10	10	38	
Patents By Year of Application:	0	0	0	3	0	0	0	0	0	5	10	11	9	0	0	38	
TERRA NIGRA HOLDING B.V.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	10	0	12	5	0	9	0	1	37	
Patents By Year of Application:	0	0	0	0	0	3	7	7	9	1	4	5	0	1	0	37	
JOHN BODGER & SONS CO.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	2	0	7	21	6	36	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	2	7	17	10	0	0	36	
14001105 27 1042 01 11551104010111		•							•	_	•						
OGLEVEE LTD.																	
Patents By Year of Grant:	0	0	0	0	12	2	0	5	4	2	4	2	2	3	0	36	
Patents By Year of Application:	0	0	0	9	5	1	7	1	0	6	4	3	0	0	0	36	
racence by rear or apprication:	U	U	U	,	,		,		U	0		3	U	U	U	30	
OGLEVEE ASSOCIATES, INC.																	
				_	•									_		•	
Patents By Year of Grant:	27	2	0	5	0	0	0	0	0	0	0	0	0	0	0	34	
Patents By Year of Application:	29	5	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
MONROVIA NURSERY CO.																	
Patents By Year of Grant:	10	2	2	3	3	1	0	1	0	2	0	2	2	2	3	33	
Patents By Year of Application:	16	1	2	2	0	1	0	0	2	0	2	4	2	1	0	33	
STARK BROTHERS NURSERIES & ORCHARDS C	OMPANY																
Patents By Year of Grant:	24	2	0	2	1	0	0	0	0	2	2	0	0	0	0	33	
Patents By Year of Application:	26	2	0	1	0	0	0	1	1	2	0	0	0	0	0	33	

PLANT PATENTS, 1977 - 1999 Page B - 4

Organizational Patenting				(Granted	: Jan 01	, 1977	- Dec 31,	1999)		Ranked Lis	t of Org	ganizatio	ns with	5 or 1	More Pat	ents
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
SEQUOIA NURSERY		_	_		_	_	_	_	_	_	_	_			_	
Patents By Year of Grant:	10	5	1	2	5	1	0	3	5	0	0	0	0	0	0	32
Patents By Year of Application:	16	1	3	3	1	0	7	1	0	0	0	0	0	0	0	32
BALL SEED CO., A DIVISION OF GEO. J.	BALL, IN	c.														
Patents By Year of Grant:	0	0	0	0	16	0	3	3	1	2	6	0	0	0	0	31
Patents By Year of Application:	0	0	7	9	0	6	0	1	0	5	3	0	0	0	0	31
DUMMEN JUNGPFLANZENKULTUREN																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	19	6	0	6	31
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	20	6	0	5	0	31
RUTGERS UNIVERSITY																
Patents By Year of Grant:	4	1	0	0	9	7	2	0	4	2	2	0	0	0	0	31
Patents By Year of Application:	5	0	3	12	1	2	4	3	0	1	0	0	0	0	0	31
TWYFORD INTERNATIONAL, INC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	7	3	8	9	2	1	30
Patents By Year of Application:	0	0	0	0	0	0	0	1	6	4	9	8	2	0	0	30
DRISCOLL STRAWBERRY ASSOCIATES INC.																
Patents By Year of Grant:	13	1	0	2	1	2	1	0	0	3	1	0	0	3	1	28
Patents By Year of Application:	14	2	0	3	1	0	0	0	3	1	0	2	2	0	0	28
KLEMM & SOHN																
Patents By Year of Grant:	0	0	1	3	5	3	2	2	2	8	2	0	0	0	0	28
Patents By Year of Application:	4	0	0	6	4	2	2	2	8	0	0	0	0	0	0	28
GOLDSMITH SEEDS, INC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	13	0	3	6	0	0	2	3	27
Patents By Year of Application:	0	0	0	0	0	0	13	0	3	5	1	2	3	0	0	27
CEBECO LILIES, INC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	1	0	1	8	0	0	9	5	24
Patents By Year of Application:	0	0	0	0	0	1	0	1	0	8	0	4	10	0	0	24
GEBR. VLETTER & J.A. DEN HAAN																
Patents By Year of Grant:	0	0	0	0	0	5	0	0	17	1	0	0	0	0	0	23
Patents By Year of Application:	0	0	0	4	1	0	18	0	0	0	0	0	0	0	0	23
SUNSHINE FOLIAGE WORLD																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	3	4	2	1	7	6	23
Patents By Year of Application:	0	0	0	0	0	0	0	0	3	4	2	7	3	4	0	23

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31,	1999)	1	Ranked Li	st of Or	ganizati	ons with	5 or	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
PURDUE RESEARCH FOUNDATION																	
Patents By Year of Grant:	18	0	0	1	0	0	0	0	0	0	2	0	1	0	0	22	
Patents By Year of Application:	18	1	0	0	0	0	0	0	2	0	1	0	0	0	0	22	
CORNELL RESEARCH FOUNDATION INC.																	
Patents By Year of Grant:	3	1	1	2	1	1	0	2	0	2	0	1	0	0	7	21	
Patents By Year of Application:	7	0	0	2	0	2	1	0	2	0	0	0	7	0	0	21	
ETS. GUILLOU FRERES																	
Patents By Year of Grant:	0	0	0	0	0	7	2	0	0	0	2	2	2	1	4	20	
Patents By Year of Application:	0	0	0	0	7	2	0	0	0	2	3	5	1	0	0	20	
SELECTION NEW PLANT SARL																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	11	6	2	0	19	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	11	0	7	1	0	0	19	
BALL HORTICULTURAL COMPANY																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	13	5	0	18	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	
PLANT SCIENCES, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	4	1	2	2	0	1	4	1	2	17	
Patents By Year of Application:	0	0	0	0	4	2	1	2	0	0	1	4	2	1	0	17	
SUN VALLEY BULB FARMS, INC.																	
Patents By Year of Grant:	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	
Patents By Year of Application:	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	
SUPERIOR FARMING COMPANY																	
Patents By Year of Grant:	15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	17	
Patents By Year of Application:	15	1	0	0	1	0	0	0	0	0	0	0	0	0	0	17	
B. L. COBIA, INC.		0	,	0	^	_	0	•	^	•	0	•	0	0	^	1.6	
Patents By Year of Grant: Patents By Year of Application:	8 11	0	0	5	0	5 0	0	0	0	0	0	0	0	0	0	16 16	
B. V. HANDELSKWEKERIJ/M. C. VAN STAAVE	REN																
Patents By Year of Grant:	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
Patents By Year of Application:	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
ENTHOVEN BREEDING B.V.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	8	0	0	6	2	16	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	8	0	6	0	2	0	16	

Organizational Patenting				(Grante	ed: Jan (1, 1977	- Dec 31	, 1999)	F	anked Li	st of Or	ganizati	ons with	5 or	More Pat	tents	-
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
DI LUE GOLDANI																	
PLANT COMPANY Patents By Year of Grant:	0	0	0	0	0	0	8	5	0	0	0	0	0	0	3	16	
Patents By Year of Application:	0	0	0	0	8	5	0	0	0	0	0	0	3	0	0	16	
1400100 27 1041 01 1.551104010111				•		•	<u>.</u>	•	Ū	•	•	_	•	_	ū		
CORN. BAK B.V.																	
Patents By Year of Grant:	0	0	0	0	0	0	3	0	2	3	0	1	0	2	4	15	
Patents By Year of Application:	0	0	0	0	1	2	1	1	2	2	0	1	5	0	0	15	
FISCHER GERANIUMS, INC.																	
Patents By Year of Grant:	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	15	
Patents By Year of Application:	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
VII DOTONE AGRICULTURE TVO																	
MILESTONE AGRICULTURE INC.	•	•	•	0	•	0	0	•	0	0	3	0		5		1.5	
Patents By Year of Grant: Patents By Year of Application:	0	0	0	0	0	0	0	0	0	3	3 1	8	6 2	5 1	1	15 15	
Patents by fear of Application:	U	U	U	U	U	U	U	U	U	3	1	0	2	1	U	13	
POULSEN ROSER APS																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	15	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	
SAN JOAQUIN ROSE CO.																	
Patents By Year of Grant:	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
Patents By Year of Application:	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
BAY CITY FLOWER COMPANY, INC.				_	_	_		_				_	_				
Patents By Year of Grant:	0	0	0	1	0	1	1	1	0	1	0	5	1	2	1	14	
Patents By Year of Application:	0	1	0	0	2	0	1	1	0	1	4	1	3	0	0	14	
BLOOMS OF BRESSINGHAM LTD.																	
Patents By Year of Grant:	0	0	0	0	0	1	1	0	2	3	1	0	1	3	2	14	
Patents By Year of Application:	0	0	0	0	2	0	2	0	3	1	1	0	5	0	0	14	
O. M. SCOTT AND SONS COMPANY																	
Patents By Year of Grant:	3	0	0	3	5	0	0	1	1	0	1	0	0	0	0	14	
Patents By Year of Application:	3	3	3	2	0	1	0	1	1	0	0	0	0	0	0	14	
OGLESBY PLANT LABORATORIES, INC.																	
Patents By Year of Grant:	0	0	0	0	1	0	1	0	2	2	0	1	3	4	0	14	
Patents By Year of Application:	0	0	0	1	0	1	2	0	2	0	1	6	1	0	0	14	
CANTELLICIUM OLUEDI TATOLIDO CATOLI																	
SAATZUCHT QUEDLINBURG GMBH Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	12	2	0	14	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	13	12	0	0	14	
racence by rear or appricacion:	Ū	Ū	J	3	9	Ū	U	3	J	U	Ū	13	-	Ū	3	7.7	

Organizational Patenting				(Grante	d• .Tan O	1 1977	- Dec 31	1999)	R:	anked Li	st of Or	ranizatio	nng with	5 or 1	More Pat	ents	
organizacionar racenerny				(Ozdiico	a. oan o	,_, _,,,	DCC 31	, 1000,		umicu di	DC OI OI;	Junipudi	J11D W1C11	5 01 .	aore rue	CIICD	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
CARLTON ROSE NURSERIES, INC.																	
Patents By Year of Grant:	6	1	0	1	1	1	0	2	0	0	0	0	1	0	0	13	
Patents By Year of Application:	7	1	0	1	1	2	0	0	0	0	1	0	0	0	0	13	
racence by rear or approachem.	,	-		-	-	-	•	•	•	•	-		•	•	· ·	-13	
E. G. HILL CO., INC.																	
	-	4	•	0	•	•	0	0	•	0	0	0	0	0	0	1.2	
Patents By Year of Grant:	7 11	4	0 0	0	0	0	0	2	2 0	0	0	0	0	0	0	13	
Patents By Year of Application:	11	0	U	U	U	U	U	2	U	U	U	U	U	U	U	13	
T TRANS GOVERN A GOV GO																	
J. FRANK SCHMIDT & SON CO.		_		_		_			_					_			
Patents By Year of Grant:	0	1	0	1	0	1	4	0	1	0	2	0	0	3	0	13	
Patents By Year of Application:	2	0	0	1	2	2	0	1	0	2	0	0	3	0	0	13	
RESEARCH CORPORATION TECHNOLOGIES, IN																	
Patents By Year of Grant:	0	0	0	0	1	4	6	0	1	0	1	0	0	0	0	13	
Patents By Year of Application:	0	0	1	0	10	0	1	0	0	0	1	0	0	0	0	13	
GREEN CIRCLE GROWERS, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	11	1	0	12	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	
HER MAJESTY THE QUEEN IN RIGHT OF CAN	ADA, AS	REPRESEN	TED BY I	HE MINIS	TER OF A	GRICULTU	RE										
Patents By Year of Grant:	0	0	0	0	0	0	0	2	0	0	5	0	4	0	1	12	
Patents By Year of Application:	0	0	0	0	0	0	2	0	1	4	0	4	1	0	0	12	
HILVERDA B.V.																	
Patents By Year of Grant:	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0	12	
Patents By Year of Application:	4	0	0	0	8	0	0	0	0	0	0	0	0	0	0	12	
ITO PACKING CO., INC.																	
Patents By Year of Grant:	0	0	0	1	2	4	0	2	1	0	1	1	0	0	0	12	
Patents By Year of Application:	0	1	2	3	1	2	1	0	0	1	1	0	0	0	0	12	
RIJNPLANT																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	12	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	2	2	8	0	12	
SIRI BROTHERS NURSERY, INC.																	
Patents By Year of Grant:	8	1	1	1	1	0	0	0	0	0	0	0	0	0	0	12	
Patents By Year of Application:	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
WIESMOOR-GARTNEREI UND BAUMSCHULE GMB	Н																
Patents By Year of Grant:	3	0	4	0	5	0	0	0	0	0	0	0	0	0	0	12	
Patents By Year of Application:	7	0	4	1	0	0	0	0	0	0	0	0	0	0	0	12	
• • • • • • • • • • • • • • • • • • • •						-		-		-			-				

PLANT PATENTS, 1977 - 1999 Page B - 8

Organizational Patenting	(Granted: Jan 01, 1977 - Dec 31, 1999)	Ranked List of Organiza	tions with 5 or More Patents

Organizacional Facencing				(Grance	a. Dan C	, , , , , ,	- Dec 31	, 1000)		dined II	BC OI OI	ganizaci	OIIS WICII	J 01 .	MOTE FAC	Circs	
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
WOLFGANG BOCK PFLANZENEXPORT KG																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	3	5	4	12	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	3	3	6	0	0	12	
FLORIDA FOUNDATION SEED PRODUCERS, I	NC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	2	4	2	2	1	0	11	
Patents By Year of Application:	0	0	0	0	0	0	0	2	3	3	1	2	0	0	0	11	
FRUIT TREE RESEARCH STATION, MINISTR	OF AGRI	CULTURE,	FORESTR	RY AND FI	SHERIES												
Patents By Year of Grant:	0	0	0	0	3	0	1	0	3	1	2	1	0	0	0	11	
Patents By Year of Application:	0	0	3	0	0	1	2	2	0	2	1	0	0	0	0	11	
HARTMAN PLANT LABORATORIES, INC.																	
Patents By Year of Grant:	0	0	0	0	6	2	3	0	0	0	0	0	0	0	0	11	
Patents By Year of Application:	0	0	6	0	5	0	0	0	0	0	0	0	0	0	0	11	
HOFFGAARDE B.V.																	
Patents By Year of Grant:	0	0	0	0	0	2	0	0	0	1	7	0	0	0	1	11	
Patents By Year of Application:	0	0	0	0	2	0	0	0	0	8	0	0	1	0	0	11	
INTER-PLANT PATENT MARKETING, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	3	1	3	0	4	0	0	0	11	
Patents By Year of Application:	0	0	0	0	3	0	2	2	0	0	4	0	0	0	0	11	
INTERNATIONAL PLANT BREEDING AG																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	
IOWA STATE UNIVERSITY RESEARCH FOUND		•															
Patents By Year of Grant:	5	5	0	1	0	0	0	0	0	0	0	0	0	0	0	11	
Patents By Year of Application:	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
JOSEPH H. HILL COMPANY																	
Patents By Year of Grant:	8	0	0	1	1	0	0	0	1	0	0	0	0	0	0	11	
Patents By Year of Application:	8	1	1	0	0	0	1	0	0	0	0	0	0	0	0	11	
L. DAEHNFELDT A/S																	
Patents By Year of Grant:	0	0	1	7	1	0	0	0	0	0	0	2	0	0	0	11	
Patents By Year of Application:	1	7	0	1	0	0	0	0	0	0	2	0	0	0	0	11	
RESEARCH CORPORATION																	
Patents By Year of Grant:	3	2	0	6	0	0	0	0	0	0	0	0	0	0	0	11	
Patents By Year of Application:	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	11	

Organizational Patenting				(Grante	ed: Jan (1, 1977	- Dec 31	, 1999)	F	Ranked Li	st of Or	ganizati	ons with	5 or	More Pat	tents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
SUN WORLD, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	3	0	4	0	0	0	1	3	0	11	
Patents By Year of Application:	0	0	0	0	0	3	2	2	0	0	0	4	0	0	0	11	
ADAMS COUNTY NURSERY, INC.																	
Patents By Year of Grant:	0	0	0	1	4	0	0	0	0	0	0	0	1	1	3	10	
Patents By Year of Application:	0	1	0	4	0	0	0	0	0	0	1	0	4	0	0	10	
BEGONIA BREEDERS ASSOC. B.V.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	7	3	10	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	
	-	-	-	-	,	-	-	-		-	-	-		-	•		
CHOPIN & WRIGHT NURSERY, LTD.																	
Patents By Year of Grant:	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
Patents By Year of Application:	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
CLEARWATER NURSERY, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	2	2	3	0	2	1	10	
Patents By Year of Application:	0	0	0	0	0	0	0	1	1	2	3	2	1	0	0	10	
GD (DTLLWIDT) TVG																	
CP (DELAWARE), INC.	0	^	•	0	0	^	0	•	^	•	0	0	0	_	-	10	
Patents By Year of Grant: Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	8	5 2	5	10 10	
racence by rear or apprication.	Ū	Ū	·	Ū	Ū	Ū	J	Ū	Ū	Ū	·	Ū	Ü		Ū	10	
GEBR. VERWER																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	
H. P. METZLER & SONS, INC.																	
Patents By Year of Grant:	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	10	
Patents By Year of Application:	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
KNUD JEPSEN A/S																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	4	0	6	0	10	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	4	5	1	0	0	10	
STATE OF ISRAEL, MINISTRY OF AGRICULTU	IRE. ACD	TCIII,TIIDA	I. RESEAD	CH ORGAN	ITZATTON	THE VOT	CANI CEN	rer									
Patents By Year of Grant:	O O	0	u Kesean O	O ORGAN	0	0	0	4	2	3	0	0	0	0	1	10	
Patents By Year of Application:	0	0	0	0	0	0	6	3	0	0	0	0	1	0	0	10	
TREESEARCH (PARTNERSHIP)																	
Patents By Year of Grant:	5	2	0	0	0	0	0	0	0	0	0	0	0	1	2	10	
Patents By Year of Application:	7	0	0	0	0	0	0	0	0	0	0	1	2	0	0	10	

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31	, 1999)	R	anked Li	st of Or	ganizati	ons with	5 or	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
UNIVERSITY OF MINNESOTA, THE REGENTS	OF																
Patents By Year of Grant:	2	0	0	0	1	3	0	1	1	0	0	0	0	1	1	10	
Patents By Year of Application:	2	0	0	4	0	1	1	0	0	0	0	1	1	0	0	10	
DENHOLM SEEDS, INC.																	
Patents By Year of Grant:	0	0	4	0	3	0	1	1	0	0	0	0	0	0	0	9	
Patents By Year of Application:	4	0	3	0	0	1	1	0	0	0	0	0	0	0	0	9	
GOLDSTOCK BREEDING LIMITED																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	9	
Patents By Year of Application:	0	0	0	0	0	0	0	3	2	4	0	0	0	0	0	9	
MITSUWA NURSERY, INC.																	
Patents By Year of Grant:	0	3	0	0	1	1	3	0	1	0	0	0	0	0	0	9	
Patents By Year of Application:	3	0	0	1	3	1	1	0	0	0	0	0	0	0	0	9	
NATIVE PLANTS, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	9	
Patents By Year of Application:	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	9	
SWEETBRIAR DEVELOPMENT INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	2	0	0	1	2	0	0	4	9	
Patents By Year of Application:	0	0	0	0	0	0	2	0	0	1	2	0	0	4	0	9	
TWYFORD PLANT LABORATORIES, INC.	•	•	•	•	•	•	-	•	•	•	•	•	•	•	•	•	
Patents By Year of Grant:	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0	9	
Patents By Year of Application:	0	U	0	0	9	U	0	0	U	0	0	0	0	0	0	9	
UNIVERSITY OF ARKANSAS																	
Patents By Year of Grant:	0	0	0	0	3	0	0	0	4	0	0	0	2	0	0	9	
Patents By Year of Application:	0	0	3	0	0	0	0	4	0	0	1	1	0	0	0	9	
WEYERHAEUSER COMPANY																	
Patents By Year of Grant:	1	2	0	1	4	1	0	0	0	0	0	0	0	0	0	9	
Patents By Year of Application:	4	0	1	4	0	0	0	0	0	0	0	0	0	0	0	9	
BAILEY NURSERIES, INC.																	
Patents By Year of Grant:	2	0	0	0	1	0	0	0	1	1	0	0	1	1	1	8	
Patents By Year of Application:	2	0	0	1	0	0	1	1	0	0	0	1	1	1	0	8	
CO-OPERATIVE ROSE GROWERS, INC.																	
Patents By Year of Grant:	0	1	1	0	3	1	0	2	0	0	0	0	0	0	0	8	
Patents By Year of Application:	2	0	2	1	1	0	2	0	0	0	0	0	0	0	0	8	
racence by rear or apprication:		Ū	-	_	_	v	4	J	J	v	v	v	U	J	J	0	

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31	, 1999)	R	anked Li	st of Or	ganizati	ons with	5 or 1	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
COLORADO STATE UNIVERSITY RESEARCH FO	UNDATION																
Patents By Year of Grant:	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	
FIDES, HANDELSKWEKERIJ																	
Patents By Year of Grant:	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
INTERNATIONAL PLANT MANAGEMENT																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	
ratenes by rear of Application:	U	U	U	U	U	U	U	U	U	U	U	0	U	U	U		
KENT'S BROMELIAD NURSERY, INC.																	
				•						•	_	_	_	_		•	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0 2	0 3	2 2	3	2	1	0	8	
Patents By Year of Application:	0	0	0	0	0	0	0	0	2	3	2	1	U	0	0	8	
NEW PLANTS																	
Patents By Year of Grant:	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	0	1	2	5	0	0	0	0	0	0	0	0	0	0	0	8	
OMS INVESTMENTS, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	1	1	4	1	1	8	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	1	2	4	1	0	0	8	
PELARGONIEN-FISCHER KG																	
Patents By Year of Grant:	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
PLANTAS DE NAVARRA S.A.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	2	0	3	0	2	0	0	1	8	
Patents By Year of Application:	0	0	0	0	0	2	0	3	0	0	2	0	1	0	0	8	
• • • • • • • • • • • • • • • • • • • •																	
WASHINGTON STATE UNIVERSITY RESEARCH	FOIINDATT	ON. TNC.															
Patents By Year of Grant:	0	0	0	0	3	0	0	2	0	1	1	0	0	1	0	8	
Patents By Year of Application:	0	0	0	3	0	0	2	1	0	1	0	0	1	0	0	8	
racence by rear or apprication:	v	Ū	J	,	v			-	v	-	J	· ·	-	· ·	J		
BALL FLORAPLANT																	
	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	7	
Patents By Year of Grant:	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	
Patents By Year of Application:	U	U	U	U	U	U	U	7	U	U	U	U	U	U	U	7	
DUDGUELL MUDGEDY TVG																	
BURCHELL NURSERY, INC.			_									•		_	_	_	
Patents By Year of Grant:	4	0	1	0	0	0	0	0	0	0	0	0	0	1	1	7	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	7	

Organizational Patenting	(Granted: Jan 01, 1977 - Dec 31, 1999) Ranked List of Organizations with 5 or More Patents

Organizational Patenting				(Grance	ea: Jan (11, 19//	- Dec 31	, 1999)	R	anked Li	st or or	ganizati	ons with	5 OF	more Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
DENACHTVLINDER B.V.	0	0	0	^	^	0	0	0	0	2	^	^	1	3	1	7	
Patents By Year of Grant: Patents By Year of Application:	0	0	0	0	0	0	0	0	2	0	0	4	1 1	0	1 0	7	
racenes by rear or apprication:	U	U	U	U	U	U	U	U	2	U	U	-	_	U	U	,	
ELSNER PAC JUNGPFLANZEN																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	7	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	2	4	1	0	0	7	
•																	
GROOT ASSOCIATES II																	
Patents By Year of Grant:	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7	
Patents By Year of Application:	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7	
L. DAEHNFELDT LTD.																	
Patents By Year of Grant:	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7	
Patents By Year of Application:	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	
MIYOSHI & CO. LTD.														_		_	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0 3	3	0 0	4	0	7 7	
Patents By Year of Application:	0	U	0	0	0	0	0	U	0	0	3	4	U	0	0	7	
REEDLEY NURSERY, INC.																	
Patents By Year of Grant:	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
Patents By Year of Application:	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	, 7	
	•		-	-	-	-	-	-	-	-		-	-		-	•	
SAKATA SEED AMERICA, INC.																	
Patents By Year of Grant:	0	0	0	0	3	0	0	0	0	0	0	0	0	3	1	7	
Patents By Year of Application:	0	0	2	1	0	0	0	0	0	0	0	4	0	0	0	7	
STEWART ORCHIDS																	
Patents By Year of Grant:	0	0	0	1	3	2	0	0	1	0	0	0	0	0	0	7	
Patents By Year of Application:	0	1	1	3	1	0	1	0	0	0	0	0	0	0	0	7	
UNIVERSITY OF ILLINOIS		_	_	^	_	_	_	_		_	_	_	_	_	_	_	
Patents By Year of Grant:	4 6	2 0	0	0	0	0	0 1	0	1 0	0	0	0	0 0	0	0	7 7	
Patents By Year of Application:	0	U	U	U	U	U	1	U	U	U	U	U	U	U	U	,	
AGROPLANT-SELECT BV																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	
ASTERKLUBBEN																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	

PLANT PATENTS, 1977 - 1999

Page B - 13

Organizational Patenting				(Grante	ed: Jan (1, 1977	- Dec 31	, 1999)	F	Ranked Li	st of Or	ganizati	ons with	5 or	More Pat	tents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
D. S. COLE GROWERS, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	2	1	1	1	1	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	2	1	1	2	0	0	6	
ESTABLISSEMENTS BARBERAT ET BLANC, LAI															•	_	
Patents By Year of Grant:	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	6 6	
Patents By Year of Application:	U	U	U	2	4	U	U	U	U	U	U	U	U	U	U	0	
GEBR. MAN C.V.																	
Patents By Year of Grant:	0	0	0	0	0	2	0	0	0	0	0	0	0	3	1	6	
Patents By Year of Application:	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	6	
	ŭ	•	•	•	-	•	•	·	•	•	•	•	-	•	ŭ	-	
GEO. W. PARK SEED CO., INC.																	
Patents By Year of Grant:	0	0	1	0	3	0	0	0	0	0	0	0	0	2	0	6	
Patents By Year of Application:	1	0	3	0	0	0	0	0	0	0	0	2	0	0	0	6	
HILLTOP ORCHARDS & NURSERIES, INC.																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
KLEHM BOYS PARTNERSHIP																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
KOALA BLOOMS PTY. LTD.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	
ratents by rear or apprication.	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ū	Ü	
METZLER INVESTMENTS																	
Patents By Year of Grant:	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	1	1	0	4	0	0	0	0	0	0	0	0	0	0	0	6	
NATIONAL SEED DEVELOPMENT ORGANISATION	N LIMITE	D															
Patents By Year of Grant:	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	
OGLESBY PLANTS INTERNATIONAL, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	
DOGEG BY EDED EDIGING TWO																	
ROSES BY FRED EDMUNDS, INC. Patents By Year of Grant:	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	6	
Patents By Year of Application:	0	0	0	0	0	1	3	2	0	0	0	0	0	0	0	6	
racence by rear or apprication:	Ü	Ū	J	3	3	-	3	-	J	J	J	Ū	J	Ū	J	•	

Organizational Patenting				(Grante	d: Jan (1, 1977	- Dec 31	, 1999)	R	anked Li	st of Or	ganizati	ons with	5 or	More Pat	tents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
TERRA-NOVA NURSERIES, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	3	0	0	0	1	2	6	
Patents By Year of Application:	0	0	0	0	0	0	0	0	3	0	0	0	2	1	0	6	
BIOTECH PLANTS PTY. LTD.																	
Patents By Year of Grant:	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
ratenes by rear or apprication.	J	Ū	3	J	v	Ū	J	Ū	Ū	Ū	J	Ū	Ū	Ū	Ū	3	
BODGER SEEDS, LTD.																	
Patents By Year of Grant:	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	5	
CARLTON NURSERY COMPANY, INC.	_	_	_	_	_	_	_	_	_	_	_	_	•	_	_	_	
Patents By Year of Grant:	5 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	5	0	0	U	Ü	0	U	0	U	0	U	U	0	U	0	5	
CHAS. KLEHM & SON																	
Patents By Year of Grant:	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	
DELEON'S BROMELIAD WORLD, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	5	
Patents By Year of Application:	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	5	
ETABLISSEMENTS BARBERET ET BLANC																	
Patents By Year of Grant:	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
FLOWERWOOD NURSERY INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	1	1	3	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	0	0	0	1	1	1	2	0	0	0	0	5	
FRAMPTONS NURSERIES LIMITED												•	•			_	
Patents By Year of Grant:	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5 5	
Patents By Year of Application:	2	0	0	3	U	0	0	0	0	0	0	0	0	0	0	5	
H. DE MEYER - DE ROUCK B.V.B.A.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5	
Patents By Year of Application:	0	0	0	0	0	0	0	1	3	0	1	0	0	0	0	5	
HINES NURSERIES INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	3	0	0	1	1	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	3	0	0	1	0	1	0	0	0	0	0	5	

														_			
Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31,	, 1999)	R	anked Li	st of Or	ganizatio	ons with	5 or 1	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
HOKUETSU NOHJI CO., LTD.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	
M. LEK EN ZONEN, B.V.																	
Patents By Year of Grant:	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	
Patents By Year of Application:	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	5	
1400105 27 1041 01 11FF1104010111		•					•				_		•				
MT. HOOD LILIES, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	
_	0											0	0		0		
Patents By Year of Application:	U	0	0	0	0	0	0	0	4	1	0	U	U	0	U	5	
NEW WORLD PLANTS USA																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	1	0	0	4	0	0	5	
Patents By Year of Application:	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	5	
OREGON BULB FARMS, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	
POULSEN ROSER INTERNATIONAL S.A.R.L.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	5	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	
	-	-	-	-		-	-	-	-	-	-	_		-	-	-	
ROYAL SLUIS B.V.																	
Patents By Year of Grant:	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
_	0	0	5	0	0	0	0	0	0	0	0	0	0	0		5	
Patents By Year of Application:	U	U	5	U	U	U	U	U	U	U	U	U	U	U	0	5	
UNIVERSITY OF CONNECTICUT																_	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	5	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	5	
UNIVERSITY OF FLORIDA BOARD OF REGENTS																	
Patents By Year of Grant:	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	1	1	1	2	0	0	0	0	0	0	0	5	
UNIVERSITY OF TENNESSEE RESEARCH CORPO	ORATION																
Patents By Year of Grant:	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	
YOVAL AGRICULTURAL PRODUCTS LTD.																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	1	1	0	3	0	0	0	5	
Patents By Year of Application:	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	5	
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Other Organizations (410)																	
Other Organizations (419)			•					^-				~ -				682	
Patents By Year of Grant:	116	22	9	49	42	30	30	27	37	47	32	36	56	63	77	673	
Patents By Year of Application:	155	35	31	30	38	32	35	35	27	35	66	65	71	18	0	673	